

Listing of claims:

Claim 1 (canceled)

Claim 2 (previously presented): A localcast transmitter, comprising:

a first interface;

a first encoder coupled to said first interface through a second encoder;

a packet assembler coupled to said first encoder and to the first interface through the second encoder such that the packet assembler receives input from the first encoder when transmitting at a first transmission speed and the packet assembler receives input from the first interface through the second encoder when transmitting at a second transmission speed, such that first encoder is bypassed when transmitting at the second transmission speed; wherein the packet assembler interleaves a first portion of the input received and a second portion of the input received over a broadcast frame that includes sub frames; wherein the first portion is for transmission at a first latency and the second portion is for transmission at a second latency, the second latency being lower than the first latency; and wherein each sub frame includes data associated with the first portion and data associated with the second portion that are interleaved together;

a control function coupled to said first interface, said encoder and said packet assembler;

a modulator, coupled to the packet assembler, that comprises a localcast mode;

and

an antenna coupled to the modulator.

Claim 3 (previously presented): The localcast transmitter in claim 2, further comprising a data source for a local area transmission system.

Claim 4 (original): The localcast transmitter in claim 2, wherein the first interface is further comprised of at least one of a USB-compatible interface, an RS-232 interface, and an IEEE-1394 interface.

Claim 5 (previously presented): The localcast transmitter in claim 2, wherein the control function collects transmitted packets from a data source and performs handshaking functions.

Claim 6 (previously presented): The localcast transmitter in claim 2, wherein the second encoder only encodes data received from the first interface, and the first encoder only encodes a system information block.

Claim 7 (original): The localcast transmitter in claim 2, wherein the packet assembler further performs the steps of interleaving encoded system information into data segments; adding correlation information to said data segments; and converting said data segments into a bit stream.

Claim 8 (original): The localcast transmitter in claim 2, wherein the localcast transmitter is further configured to broadcast in a locally-unused portion of the FM band.

Claim 9 (previously presented): The localcast transmitter in claim 2, further comprising a data source that is further comprised of a personal computer system.

Claim 10 (previously presented): The localcast transmitter in claim 2, wherein the first encoder is further comprised of a first convolutional encoder for system information.

Claim 11 (original): The localcast transmitter in claim 10, wherein the encoder is further comprised of a second convolutional encoder for data.

Claims 12 - 43 (canceled)

Claim 44 (previously presented): A localcast transmitter included in a mobile device, wherein the mobile device includes a localcast mode and a broadcast mode, comprising:

means for interfacing with a data source;

means for encoding system information provided by the data source;

means for encoding data provided by the means for encoding system information for transmission;

means for assembling packets from data provided by the means for encoding system information when transmitting at a first transmission speed and from data provided by the means for encoding data when transmitting at a second transmission speed, such that the means for encoding data is bypassed when transmitting at a second transmission speed; wherein the means for assembling packets interleaves a first portion of input data and a second portion of the input data over a broadcast frame that includes sub frames; wherein the first portion is for transmission at a first latency and the second portion is for transmission at a second latency, the second latency being lower than the first latency; and wherein each sub frame includes data associated with the first portion and data associated with the second portion that are interleaved together; and
a means for transmitting the assembled packets over a locally-unused FM frequency when the mobile device is in the localcast mode.

Claim 45 (previously presented): The localcast transmitter in claim 44, further comprising a means for control that is arranged to collect the data from the data source, set a desired transmission frequency, transmission mode, and signal power.

Claim 46 (previously presented): The localcast transmitter in claim 44, wherein the means for encoding data further comprises means for formatting the data into baseband samples.

Claim 47 (previously presented): The localcast transmitter in claim 44, wherein the means for transmitting further comprises means for processing that is arranged to add correlation information to the encoded data for synchronization.

Claim 48 (previously presented): The localcast transmitter in claim 47, wherein the means for processing further comprises means for interleaving data that is arranged to interleave the encoded data into segments.

Claim 49 (previously presented): The localcast transmitter in claim 44, wherein the means for transmission further comprises a means for modulation that is arranged to generate an FM frequency output in response to receipt of the encoded data.

Claim 50 (previously presented): A localcast transmitter included in a mobile device, wherein the mobile device includes a localcast mode and a broadcast mode, comprising:

- an interface that is coupled to a data source, wherein the interface is arranged for receiving data from the data source when the mobile device is in a localcast mode;

- a first encoder that is coupled to the interface through a second encoder, wherein the first encoder is arranged to encode the received data to produce encoded data;

- an assembler that is coupled to the first encoder and to the interface through the second encoder such that the assembler receives input from the first encoder when transmitting at a first transmission speed and the assembler receives input from the interface through the second encoder when transmitting at a second transmission speed, wherein the assembler is arranged to interleave the received input into data segments, add correlation information to the data segments, and convert the data segments into a bit stream; wherein interleave the received input into data segments includes interleaving a first portion of the input received and a second portion of the input received over a broadcast frame that includes sub frames; wherein the first portion is for transmission at a first latency and the second portion is for transmission at a second latency, the second latency being lower than the first latency; and wherein each sub frame includes data associated with the first portion and data associated with the second portion that are interleaved together;

- a control function that is coupled to the interface, the first encoder, the second encoder, and the assembler, wherein the control function is arranged to control handshaking functions; and

- a modulator that is coupled to the assembler, wherein the modulator is arranged to generate an FM frequency output in response to the bit stream produced by the assembler, and provide an FM frequency output to an antenna.

Claim 51 (previously presented): The localcast transmitter in claim 50, wherein the interface is further comprised of at least one of a USB-compatible interface, an RS-232 interface, and an IEEE-1394 interface.

Claim 52 (previously presented): The localcast transmitter in claim 50, wherein the second encoder further comprises a system encoder that is coupled to a data encoder.

Claim 53 (previously presented): The localcast transmitter in claim 52, wherein the encoder is further arranged such that data from the system encoder bypasses the data encoder when the mobile device is in a turbo mode.